

RTEP Window 3 Solution

General Information

Proposing entity name	CONFIDENTIAL
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	CONFIDENTIAL
Company proposal ID	CONFIDENTIAL
PJM Proposal ID	548
Project title	RTEP Window 3 Solution
Project description	A large scale set of projects that solve the growing congestion issues in the southern Pennsylvania/northern Virginia/Maryland/West Virginia area. The project involves strategic rebuilds, substation upgrades, and greenfield transmission lines that primarily follow existing corridor. This strategic use of existing corridor greatly reduces the risk of projects being delayed due to opposition.
Email	CONFIDENTIAL
Project in-service date	06/2030
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	CONFIDENTIAL

Project Components

1. Bethel/Riverton 138kV Terminal Equipment Upgrade
2. Morgan/Cherry Run 138kV Terminal Equipment Upgrade
3. Grand Point/Fayetteville 138kV Terminal Equipment Upgrade

4. Glen Falls/Harrison Reserve 138kV Terminal Equipment Upgrade
5. Lewistown/Reeds Gap 115kV Terminal Equipment Upgrade
6. Dickerson Station D/Dickerson H 230kV Terminal Equipment Upgrade
7. 502 Junction Substation Upgrade
8. Beaumeade Substation Upgrade
9. Black Oak Substation Upgrade
10. Conastone Substation Upgrade
11. Doubs Substation Upgrade
12. Goose Creek Substation Upgrade
13. Hunterstown Substation Upgrade
14. North Delta Substation Upgrade
15. Vint Hill Substation Upgrade
16. DTC Substation Upgrade
17. Mars Substation Upgrade
18. Rollins Ford Substation Upgrade
19. NOVI Substation Upgrade
20. Bristers Substation Upgrade
21. Peach Bottom Substation Upgrade
22. Vint Hill - Loudoun Reconductor
23. Conastone - Peach Bottom Rebuild
24. Beaumeade - BECO - DTC 230kV Transmission Line Upgrade
25. 502 Junction - Black Oak 500kV Transmission Line
26. Black Oak - Doubs Greenfield 500kV Transmission Line
27. Hunterstown - Doubs Greenfield 500kV Transmission Line
28. Doubs - Goose Creek Greenfield 500kV Transmission Line
29. Black Oak - Doubs Greenfield 500kV Transmission Line (Shared ROW)
30. Front Royal Substation Upgrade
31. BECO Substation Upgrade
32. Hunterstown - Doubs Greenfield 500kV Transmission Line (Shared ROW)

- 33. Doubs - Goose Creek Greenfield 500kV Transmission Line (Shared ROW)
- 34. Front Royal - Vint Hill Greenfield 500kV Transmission Line
- 35. Conastone - North Delta Greenfield 500kV Transmission line (Shared ROW)
- 36. Goose Creek - Beaumeade Greenfield Underground 500kV Double Circuit Transmission Line
- 37. Peach Bottom - North Delta Reconductor

Substation Upgrade Component

Component title	Bethel/Riverton 138kV Terminal Equipment Upgrade
Project description	CONFIDENTIAL
Substation name	Bethel / Riverton
Substation zone	1203
Substation upgrade scope	Terminal equipment will be upgraded to match the capacity of the existing transmission line.

Transformer Information

None	
New equipment description	The upgrade upgrade consists of any limiting terminal equipment.
Substation assumptions	The substation has space and can accommodate the higher rated equipment.
Real-estate description	
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL

Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$401,437.00
Component cost (in-service year)	\$517,833.00

Substation Upgrade Component

Component title	Morgan/Cherry Run 138kV Terminal Equipment Upgrade
Project description	CONFIDENTIAL
Substation name	Morgan / Cherry Run
Substation zone	1203
Substation upgrade scope	Terminal equipment will be upgraded to match the capacity of the existing transmission line.

Transformer Information

None	
New equipment description	The upgrade upgrade consists of any limiting terminal equipment.
Substation assumptions	The substation has space and can accommodate the higher rated equipment.
Real-estate description	
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL

ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$401,437.00
Component cost (in-service year)	\$517,833.00

Substation Upgrade Component

Component title	Grand Point/Fayetteville 138kV Terminal Equipment Upgrade
Project description	CONFIDENTIAL
Substation name	Grand Point / Fayetteville
Substation zone	1204
Substation upgrade scope	Terminal equipment will be upgraded to match the capacity of the existing transmission line.

Transformer Information

None	
New equipment description	The upgrade upgrade consists of any limiting terminal equipment.
Substation assumptions	The substation has space and can accommodate the higher rated equipment.
Real-estate description	
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$401,437.00
Component cost (in-service year)	\$517,833.00

Substation Upgrade Component

Component title	Glen Falls/Harrison Reserve 138kV Terminal Equipment Upgrade
Project description	CONFIDENTIAL
Substation name	Glen Falls / Harrison Reserve
Substation zone	1201
Substation upgrade scope	Terminal equipment will be upgraded to match the capacity of the existing transmission line.

Transformer Information

None	
New equipment description	The upgrade upgrade consists of any limiting terminal equipment.
Substation assumptions	The substation has space and can accommodate the higher rated equipment.
Real-estate description	

Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$401,437.00
Component cost (in-service year)	\$517,833.00

Substation Upgrade Component

Component title	Lewistown/Reeds Gap 115kV Terminal Equipment Upgrade
Project description	CONFIDENTIAL
Substation name	Lewistown / Reeds Gap
Substation zone	209
Substation upgrade scope	Terminal equipment will be upgraded to match the capacity of the existing transmission line.

Transformer Information

None	
New equipment description	The upgrade upgrade consists of any limiting terminal equipment.

Substation assumptions	The substation has space and can accommodate the higher rated equipment.
Real-estate description	
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$401,437.00
Component cost (in-service year)	\$517,833.00
Substation Upgrade Component	
Component title	Dickerson Station D/Dickerson H 230kV Terminal Equipment Upgrade
Project description	CONFIDENTIAL
Substation name	Dickerson Station D / Dickerson H
Substation zone	268
Substation upgrade scope	Terminal equipment will be upgraded to match the capacity of the existing transmission line.

Transformer Information

None	
New equipment description	The upgrade upgrade consists of any limiting terminal equipment.
Substation assumptions	The substation has space and can accommodate the higher rated equipment.
Real-estate description	
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$574,481.00
Component cost (in-service year)	\$739,762.00

Substation Upgrade Component

Component title	502 Junction Substation Upgrade
Project description	CONFIDENTIAL
Substation name	502 Junction

Substation zone	1204
Substation upgrade scope	The substation scope will involve adding two (2) new 5000A, 500kV breakers in a double breaker configuration to create a new line position for the new 502 Junction - Black Oak 500kV transmission line.

Transformer Information

None	
New equipment description	500kV Circuit Breakers (2): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to accommodate the new 500kV transmission line.
Real-estate description	The current substation extents should be able to accommodate the new transmission line position.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$7,563,908.00
Component cost (in-service year)	\$9,757,071.00

Substation Upgrade Component

Component title	Beaumeade Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Beaumeade
Substation zone	352
Substation upgrade scope	The substation scope will involve adding four (4) new 5000A, 230kV breakers in a double breaker configuration (built to expand to breaker and a half in the future) to create a two new line position for the two new 500/230kV transformers.

Transformer Information

	Name	Capacity (MVA)
Transformer	Beaumeade Transformer #1	1200
	High Side	Low Side Tertiary
Voltage (kV)	500	230
	Name	Capacity (MVA)
Transformer	Beaumeade Transformer #2	1200
	High Side	Low Side Tertiary
Voltage (kV)	500	230
New equipment description	230kV Circuit Breakers (4): 5000A continuous current rating 230kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 1992 MVA rating, and a short circuit current rating of 63kA. The two (2) new 500/230kV transformers will each have a capacity of 1200 MVA.	
Substation assumptions	It appears that the substation can be expanded to the north to accommodate the new line positions.	
Real-estate description	Dominion owns the land north of the current substation.	

Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$61,296,699.00
Component cost (in-service year)	\$79,069,746.00

Substation Upgrade Component

Component title	Black Oak Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Black Oak
Substation zone	1203
Substation upgrade scope	The substation scope will involve adding two (2) new 5000A, 500kV breakers in a breaker and a half configuration to create two new line positions for the new 502 Junction - Black Oak 500kV transmission line and the new Black Oak - Doubs 500kV transmission line.

Transformer Information

None	
New equipment description	500kV Circuit Breakers (2): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to accommodate the new 500kV transmission line.
Real-estate description	The current substation extents should be able to accommodate the new transmission line position.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$11,345,962.00
Component cost (in-service year)	\$14,635,608.00
Substation Upgrade Component	
Component title	Conastone Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Conastone

Substation zone	1827
Substation upgrade scope	The substation scope will involve adding two (2) new 5000A, 500kV breakers in a breaker and a half configuration to create one new line positions for the new North Delta - Conastone 500kV transmission line.

Transformer Information

None	
New equipment description	500kV Circuit Breakers (2): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to accommodate the new 500kV transmission line.
Real-estate description	The current substation extents should be able to accommodate the new transmission line position.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$7,563,908.00
Component cost (in-service year)	\$9,757,072.00

Substation Upgrade Component

Component title	Doubs Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Doubs
Substation zone	1203
Substation upgrade scope	The substation scope will involve adding four (4) new 5000A, 500kV breakers in a breaker and a half configuration to create three new line positions for the new Black Oak - Doubs 500kV transmission line, Hunterstown - Doubs 500kV transmission line, and the Goose Creek - Doubs 500kV transmission line.

Transformer Information

None	
New equipment description	500kV Circuit Breakers (4): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to the south accommodate the new line positions.
Real-estate description	Their appears to be land to the south to allow the substation to expand.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL

Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$17,018,794.00
Component cost (in-service year)	\$21,953,411.00

Substation Upgrade Component

Component title	Goose Creek Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Goose Creek
Substation zone	366
Substation upgrade scope	The substation scope will involve adding nine (9) new 5000A, 500kV breakers in a breaker and a half configuration to create six new line positions. This portion of the substation will be gas-insulated due to space requirements. Some existing line positions will be moved into the gas-insulated portion of the substation.

Transformer Information

None	
New equipment description	500kV gas-insulated Circuit Breakers (9): 5000A continuous current rating 500kV gas-insulated Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to the north to accommodate the new line positions.
Real-estate description	Their appears to be land to the north to allow the substation to expand.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$52,364,412.00
Component cost (in-service year)	\$67,547,530.00

Substation Upgrade Component

Component title	Hunterstown Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Hunterstown
Substation zone	1821
Substation upgrade scope	The substation scope will involve adding three (3) new 5000A, 500kV breakers in a breaker and a half configuration to create two new line positions. The two existing lines coming into Huntertowns from the west will be moved to the new west positions, the two existing lines coming from the south will be shifted west, and the new Hunterstown - Doubs 500kV transmission line will utilize the southeast line position.

Transformer Information

None	
New equipment description	500kV Circuit Breakers (3): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.

Substation assumptions	It appears that the substation can be expanded to the west to accommodate the new line positions.
Real-estate description	Their appears to be land to the west to allow the substation to expand.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$14,337,937.00
Component cost (in-service year)	\$18,495,237.00
Substation Upgrade Component	
Component title	North Delta Substation Upgrade
Project description	CONFIDENTIAL
Substation name	North Delta
Substation zone	1824
Substation upgrade scope	The substation scope will involve adding two (2) new 5000A, 500kV breakers to upgrade the substation to a breaker and a half configuration and to add one new line position.

Transformer Information

None

New equipment description

500kV Circuit Breakers (2): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.

Substation assumptions

It appears that the substation can be expanded to accommodate the new line positions.

Real-estate description

There appears to be land to the around the substation to allow for the expansion.

Construction responsibility

CONFIDENTIAL

Benefits/Comments

CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design

CONFIDENTIAL

Permitting / routing / siting

CONFIDENTIAL

ROW / land acquisition

CONFIDENTIAL

Materials & equipment

CONFIDENTIAL

Construction & commissioning

CONFIDENTIAL

Construction management

CONFIDENTIAL

Overheads & miscellaneous costs

CONFIDENTIAL

Contingency

CONFIDENTIAL

Total component cost

\$7,563,908.00

Component cost (in-service year)

\$9,757,072.00

Substation Upgrade Component

Component title

Vint Hill Substation Upgrade

Project description

CONFIDENTIAL

Substation name	Vint Hill
Substation zone	366
Substation upgrade scope	The substation scope will involve adding three (3) new 5000A, 500kV gas-insulated breakers in a breaker and a half configuration to create two new line position. One of the line positions will be for a new 300MVAR capacitor.

Transformer Information

None	
New equipment description	500kV gas-insulated Circuit Breakers (3): 5000A continuous current rating 500kV gas-insulated Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA. 300MVAR capacitor.
Substation assumptions	It appears that the substation can be expanded to accommodate the new line positions.
Real-estate description	Their appears to be sufficient land to allow for a GIS expansion.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$20,322,085.00

Component cost (in-service year) \$26,214,496.00

Substation Upgrade Component

Component title DTC Substation Upgrade

Project description CONFIDENTIAL

Substation name DTC

Substation zone 352

Substation upgrade scope The substation scope will involve adding one (1) 230kV 5000A breaker and a new 150MVAR capacitor.

Transformer Information

None

New equipment description 230kV Circuit Breakers (1): 5000A continuous current rating 230kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 1992 MVA rating, and a short circuit current rating of 63kA. 230kV Capacitor (1): 150MVAR rating

Substation assumptions It appears that the substation can be expanded to accommodate the new capacitor.

Real-estate description Their appears to be sufficient land to allow for the expansion.

Construction responsibility CONFIDENTIAL

Benefits/Comments CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design CONFIDENTIAL

Permitting / routing / siting CONFIDENTIAL

ROW / land acquisition CONFIDENTIAL

Materials & equipment CONFIDENTIAL

Construction & commissioning CONFIDENTIAL

Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$6,379,088.00
Component cost (in-service year)	\$8,228,713.00

Substation Upgrade Component

Component title	Mars Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Mars
Substation zone	366
Substation upgrade scope	The substation scope will involve adding two (2) new 5000A, 230kV breaker and two (2) new 5000A, 500kV breaker to upgrade the existing substation to eliminate the breaker contingency issues. The upgrade also includes one new transformer, rated at 1440MVA and two new capacitors, each rated for 150MVAR.

Transformer Information

	Name	Capacity (MVA)		
Transformer	Mars Transformer #2	1440		
		High Side	Low Side	Tertiary
Voltage (kV)		500	230	
New equipment description	230kV Circuit Breakers (2): 5000A continuous current rating 230kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 1991 MVA rating, and a short circuit current rating of 63kA. 500kV Circuit Breakers (2): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA. The new 500/230kV transformer will each have a capacity of 1440MVA. The new 500kV capacitors will be rated for 150MVAR each.			

Substation assumptions	It appears that the substation can be expanded to accommodate the new breaker configuration and transformer.
Real-estate description	Their appears to be land to allow the substation to expand.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$46,209,531.00
Component cost (in-service year)	\$59,608,036.00
Substation Upgrade Component	
Component title	Rollins Ford Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Rollins Ford
Substation zone	353
Substation upgrade scope	The substation scope will involve adding one (1) 230kV, 5000A circuit breaker and one (1) new 300MVAR capacitor

Transformer Information

None

New equipment description 230kV Circuit Breaker(1): 5000A rating and Isolation Disconnect Switches & associated jumper assemblies: 4000A continuous current rating, 1992 MVA rating, and a short circuit current rating of 63kA. 230kV Capacitor (1): 300MVAR rating

Substation assumptions It appears that the substation can be expanded to accommodate the new capacitor.

Real-estate description Their appears to be sufficient land to allow for the expansion.

Construction responsibility CONFIDENTIAL

Benefits/Comments CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design CONFIDENTIAL

Permitting / routing / siting CONFIDENTIAL

ROW / land acquisition CONFIDENTIAL

Materials & equipment CONFIDENTIAL

Construction & commissioning CONFIDENTIAL

Construction management CONFIDENTIAL

Overheads & miscellaneous costs CONFIDENTIAL

Contingency CONFIDENTIAL

Total component cost \$10,867,200.00

Component cost (in-service year) \$14,018,157.00

Substation Upgrade Component

Component title NOVI Substation Upgrade

Project description CONFIDENTIAL

Substation name	NOVI
Substation zone	352
Substation upgrade scope	The substation scope will involve adding one (1) new 5000A 230kV circuit breaker and one (1) 150MVAR capacitor

Transformer Information

None	
New equipment description	230kV Circuit Breaker (1): 5000A rating and Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 1992 MVA rating, and a short circuit current rating of 63kA. 230kV Capacitor (1): 150MVAR rating
Substation assumptions	It appears that the substation can be expanded to accommodate the new capacitor.
Real-estate description	Their appears to be sufficient land to allow for the expansion.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$6,379,088.00
Component cost (in-service year)	\$8,228,713.00

Substation Upgrade Component

Component title	Bristers Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Bristers
Substation zone	366
Substation upgrade scope	The substation scope will involve adding one (1) new 5000A, 500kV breakers to upgrade the existing substation to eliminate a breaker contingency issue.

Transformer Information

None	
New equipment description	500kV Circuit Breakers (1): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to accommodate the new breaker configuration.
Real-estate description	Their appears to be land to allow the substation to expand.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL

Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$3,771,954.00
Component cost (in-service year)	\$4,878,536.00

Substation Upgrade Component

Component title	Peach Bottom Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Peach Bottom
Substation zone	1824
Substation upgrade scope	The substation scope will involve upgrading the buswork to have a 5000A rating.

Transformer Information

None	
New equipment description	500kV Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 5000A buswork; 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation buswork can be upgraded.
Real-estate description	No new land is necessary for this upgrade.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL

Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$4,986,791.00
Component cost (in-service year)	\$6,432,716.00

Transmission Line Upgrade Component

Component title	Vint Hill - Loudoun Reconductor
Project description	CONFIDENTIAL
Impacted transmission line	Vint Hill - Loudoun
Point A	Vint Hill
Point B	Loudoun
Point C	
Terrain description	The terrain is a mainly farm fields. The work will all happen in existing right of way.

Existing Line Physical Characteristics

Operating voltage	500
Conductor size and type	N/A
Hardware plan description	N/A
Tower line characteristics	N/A

Proposed Line Characteristics

Designed **Operating**

Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW	
Shield wire size and type	N/A	
Rebuild line length	11.5 miles	
Rebuild portion description	The line will be reconducted from the Vint Hill substation to the Loudoun substation. New structures are not anticipated to be needed.	
Right of way	No new right of way is anticipated. The existing right of way has adequate space.	
Construction responsibility	CONFIDENTIAL	
Benefits/Comments	CONFIDENTIAL	
Component Cost Details - In Current Year \$		
Engineering & design	CONFIDENTIAL	
Permitting / routing / siting	CONFIDENTIAL	
ROW / land acquisition	CONFIDENTIAL	
Materials & equipment	CONFIDENTIAL	
Construction & commissioning	CONFIDENTIAL	
Construction management	CONFIDENTIAL	
Overheads & miscellaneous costs	CONFIDENTIAL	
Contingency	CONFIDENTIAL	
Total component cost	\$13,225,000.00	

Component cost (in-service year) \$16,905,116.00

Transmission Line Upgrade Component

Component title Conastone - Peach Bottom Rebuild

Project description CONFIDENTIAL

Impacted transmission line Conastone - Peach Bottom

Point A Conastone

Point B North Delta

Point C

Terrain description The terrain consists of rolling hills. The work will all be in existing right of way.

Existing Line Physical Characteristics

Operating voltage 500

Conductor size and type N/A

Hardware plan description N/A

Tower line characteristics The existing towers are lattice towers with a horizontal conductor configuration.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	

Shield wire size and type	Incumbent specified OPGW or OHGW
Rebuild line length	14.3 miles
Rebuild portion description	The existing Conastone - Peach Bottom 500kV transmission line will be rebuilt to a 500/230kV double circuit transmission line from the Conastone Substation to the North Delta Substation. This will be approximately 14.3 miles long. The existing lattice structures would be taken down and replaced with double circuit vertical monopole 500/230kV structures.
Right of way	No right of way expansion is anticipated as part of this rebuild.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$77,263,387.00
Component cost (in-service year)	\$98,763,443.00
Transmission Line Upgrade Component	
Component title	Beaumeade - BECO - DTC 230kV Transmission Line Upgrade
Project description	CONFIDENTIAL

Impacted transmission line	Beaumeade - DTC 230kV Transmission Line
Point A	Beaumeade
Point B	BECO
Point C	DTC
Terrain description	The terrain consists mainly of suburban area.

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	N/A
Hardware plan description	N/A
Tower line characteristics	N/A

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1573.000000	1573.000000
Winter (MVA)	1573.000000	1573.000000
Conductor size and type	Match existing	
Shield wire size and type	Match existing	
Rebuild line length	0.25 miles	
Rebuild portion description	The existing line will be broken and new deadend towers installed to facilitate looping into the existing BECO 230kV Substation.	

Right of way Existing right-of-way will be reused as available to facilitate the transmission interconnection facilities necessary to loop the lines into the new substation. Where existing right of way is not available, paralleling existing right of way will be prioritized, with greenfield portions being used as necessary.

Construction responsibility CONFIDENTIAL

Benefits/Comments CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design CONFIDENTIAL

Permitting / routing / siting CONFIDENTIAL

ROW / land acquisition CONFIDENTIAL

Materials & equipment CONFIDENTIAL

Construction & commissioning CONFIDENTIAL

Construction management CONFIDENTIAL

Overheads & miscellaneous costs CONFIDENTIAL

Contingency CONFIDENTIAL

Total component cost \$2,299,999.00

Component cost (in-service year) \$2,940,020.00

Greenfield Transmission Line Component

Component title 502 Junction - Black Oak 500kV Transmission Line

Project description CONFIDENTIAL

Point A 502 Junction

Point B Black Oak

Point C

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	
Nominal voltage	AC	
Nominal voltage	500	
Line construction type	Overhead	
General route description	<p>The 502 Junction - Black Oak 500kV line parallels existing right of way for almost the entire route length. The route starts east out of the 502 Junction substation and parallels the existing Longview Power to Fort Martin 500kV line. It then parallels the Ronco to Fort Martin 500kV corridor to the north until it meets up with the Hatfields to Ferry Power Station 500kV corridor. The route then parallels this corridor all the way to the Black Oak Substation. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.</p>	
Terrain description	<p>The terrain traversed by the project features rolling hills to mountainous slopes and segments of forested areas.</p>	
Right-of-way width by segment	<p>The project will feature a right of way width of 175 feet for the project route. The ROW will parallel existing corridor for the majority of the route.</p>	
Electrical transmission infrastructure crossings	<p>The proposed line will cross over the Albright to Bethelboro 138kV transmission line., The proposed line will cross over the Carlos JCT to Garrett 138kV transmission line., The proposed line will cross over the Jennings to Hazelton 138kV transmission line., The proposed line will cross over the Longview Power to Fort Martin 500kV transmission line., The proposed line will cross over the Penn Mar to Deep Creek 138kV transmission line., The proposed line will cross over the Ronco to Fort Martin 500kV transmission line.</p>	

Civil infrastructure/major waterway facility crossing plan	The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.
Environmental impacts	The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.
Tower characteristics	The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL

Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$458,917,694.00
Component cost (in-service year)	\$586,620,561.00

Greenfield Transmission Line Component

Component title	Black Oak - Doubs Greenfield 500kV Transmission Line
Project description	CONFIDENTIAL
Point A	Black Oak
Point B	Doubs
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	
Nominal voltage	AC	
Nominal voltage	500/138	
Line construction type	Overhead	

General route description	<p>The project starts at Black Oak and heads east, paralleling the existing Black Oak - Bedington corridor, for ~6 miles. The line continues east for approximately 10 miles but strays away from the existing corridor due to infrastructure build up that has occurred around the corridor in this area. The line then heads southeast where it parallels the existing Hampshire to Ridgeley 138kV corridor for approximately 16 miles. At this point the rebuild of the existing Hampshire to Stonewall 138kV line begins. The line will be upgraded to 500/138kV double circuit. The route follows this corridor until it meets up with the Stonewall Substation. At this point the route follows the existing Stonewall to Millville 138kV line. This line will be rebuilt to 500/138kV for its entire length. After the Millville substation the route follows the Millville to Doubs 138kV transmission line. This line is rebuilt to 500/138kV until a few spans outside of the Doubs substation. The 500kV circuit diverges from the 138kV centerline and connects into the 500kV Doubs substation. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.</p>
Terrain description	<p>The terrain traversed by the project features rolling hills to mountainous slopes and segments of forested areas.</p>
Right-of-way width by segment	<p>The project will feature a right of way width of 175 feet for the green field portion of the project. The ROW will parallel existing corridor for the first ~31 miles (the greenfield portion). For the rebuild portion, the transmission line should fit in the existing corridor, however the transmission operator may decide to expand the right-of-way.</p>
Electrical transmission infrastructure crossings	<p>The proposed line will cross over the Black Oak to Bedington 500kV transmission line., The proposed line will cross over the Black Oak to Junction 138kV transmission line in two locations., The proposed line will cross over the Double Tollgate to Millville 138kV transmission line., The proposed line will cross over the Hampshire to Ridgeley 138kV transmission line in three locations., The proposed line will cross over the Mt Storm to Doubs 500kV transmission line in three locations.</p>
Civil infrastructure/major waterway facility crossing plan	<p>The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.</p>

Environmental impacts	<p>The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.</p>
Tower characteristics	<p>The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires. The preliminary design for the double circuit 500/138kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration for the 500kV circuit and davit arms and l-string insulators in a horizontal configuration for the 138kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 138kV transmission line will utilize a single 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires.</p>
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL

Contingency	CONFIDENTIAL
Total component cost	\$200,024,814.00
Component cost (in-service year)	\$255,685,652.00

Greenfield Transmission Line Component

Component title	Hunterstown - Doubs Greenfield 500kV Transmission Line
Project description	CONFIDENTIAL
Point A	Hunterstown
Point B	Doubs
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	
Nominal voltage	AC	
Nominal voltage	500 500/230 500/138	
Line construction type	Overhead	

General route description

The project starts at Hunterstown and heads south, paralleling the existing Hunterstown - Conastone corridor, for ~7 miles. The line continues south for approximately 3 miles and meets up with the existing Germantown - Taneytown 138kV transmission line outside the Germantown Substation. The rebuild of the 138kV line to 500/138kV begins outside the Germantown Substation. The route follows this 138kV corridor for approximately 13 miles. The line then has a short single circuit 500kV portion before meeting up with the existing Carroll to Mt Airy 230kV transmission line outside of the Carroll Substation. The route then follows and rebuilds the 230kV circuit into a 500/230kV circuit. This continues south for approximately 7.5 miles. The line then continues southwest for approximately 10 miles of new 500kV single circuit corridor before paralleling the existing Doubs to Brighton 500kV corridor for the remaining 25 miles. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.

Terrain description

The terrain traversed by the project features relatively flat farmland, rolling hills, and segments of forested areas.

Right-of-way width by segment

The project will feature a right of way width of 175 feet for the green field portion of the project. For the new 500kV single circuit construction, the ROW will parallel existing corridor for ~23 miles of the total ~36 miles. For the rebuild portion, the transmission line should fit in the existing corridor, however the transmission operator may decide to expand the right-of-way.

Electrical transmission infrastructure crossings

The proposed line will cross over the Catoctin to Carroll 138kV transmission line., The proposed line will cross over the Doubs to Brighton 500kV transmission line in five locations., The proposed line will cross over the Doubs to Pleasant View 500kV transmission line., The proposed line will cross over the Hunterstown to Conastone 500kV transmission line., The proposed line will cross over the Montgomery to Lime Kiln 230kV transmission line., The proposed line will cross over the Mt Airy to New Market 230kV transmission line.

Civil infrastructure/major waterway facility crossing plan

The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.

Environmental impacts

The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.

Tower characteristics

The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires. The preliminary design for the double circuit 500/138kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration for the 500kV circuit and davit arms and l-string insulators in a horizontal configuration for the 138kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 138kV transmission line will utilize a single 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires. The preliminary design for the double circuit 500/230kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a vertical configuration for the 500kV circuit and braced post insulators in a vertical configuration for the 230kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 230kV transmission line will utilize a double bundle 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires.

Construction responsibility

CONFIDENTIAL

Benefits/Comments

CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design

CONFIDENTIAL

Permitting / routing / siting

CONFIDENTIAL

ROW / land acquisition

CONFIDENTIAL

Materials & equipment

CONFIDENTIAL

Construction & commissioning

CONFIDENTIAL

Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$193,881,307.00
Component cost (in-service year)	\$247,832,591.00

Greenfield Transmission Line Component

Component title	Doubs - Goose Creek Greenfield 500kV Transmission Line
Project description	CONFIDENTIAL
Point A	Doubs
Point B	Goose Creek
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	
Nominal voltage	AC	
Nominal voltage	500/230/230	
Line construction type	Overhead	

General route description

The project starts at Doubs and heads south, paralleling the existing transmission line corridor that exists from Doubs to Dickerson, for ~10 miles. Once south of Dickerson, the existing Dickerson Station D to Pleasant View 230kV line will be rebuilt to 500/230kV. This is approximately 8 miles long. The line then adds the existing Pleasant View to Hamilton 230kV line onto it to become a 500/230/230kV rebuild. This continues until a few spans outside of the Pleasant View substation (approximately 0.9 miles). The 500kV circuit then branches off for a few spans to enter in the Goose Creek Substation. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.

Terrain description

The terrain traversed by the project features farmland, rolling hills, and segments of forested areas.

Right-of-way width by segment

The project will feature a right of way width of 175 feet for the green field portion of the project. For the new 500kV single circuit construction, the ROW will parallel existing corridor for the majority of the length. For the rebuild portion, the transmission line should fit in the existing corridor, however the transmission operator may decide to expand the right-of-way.

Electrical transmission infrastructure crossings

The proposed line will cross over the Doubs to Aqueduct 230kV transmission line., The proposed line will cross over the Doubs to Dickerson Station H 230kV transmission line., The proposed line will cross over the Doubs to Pleasant View 500kV transmission line in two locations., The proposed line will cross over the Quince Orchard to Dickerson Station D 230kV transmission line.

Civil infrastructure/major waterway facility crossing plan

The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.

Environmental impacts	<p>The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.</p>
Tower characteristics	<p>The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires. The preliminary design for the double circuit 500/230kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a vertical configuration for the 500kV circuit and braced post insulators in a vertical configuration for the 230kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 230kV transmission line will utilize a double bundle 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires. The preliminary design for the triple circuit 500/230/230kV transmission line utilizes tubular steel h-frame structures with davit arms and v-string insulators in a horizontal configuration for the 500kV circuit and braced post insulators in a vertical configuration on each pole for the 230kV circuits. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 230kV transmission lines will utilize a double bundle 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires.</p>
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL

Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$53,073,656.00
Component cost (in-service year)	\$67,842,441.00

Greenfield Transmission Line Component

Component title	Black Oak - Doubs Greenfield 500kV Transmission Line (Shared ROW)
Project description	CONFIDENTIAL
Point A	Black Oak
Point B	Doubs
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	
Nominal voltage	AC	
Nominal voltage	500/138	
Line construction type	Overhead	

General route description

The project starts at Black Oak and heads east, paralleling the existing Black Oak - Bedington corridor, for ~6 miles. The line continues east for approximately 10 miles but strays away from the existing corridor due to infrastructure build up that has occurred around the corridor in this area. The line then heads southeast where it parallels the existing Hampshire to Ridgeley 138kV corridor for approximately 16 miles. At this point the rebuild of the existing Hampshire to Stonewall 138kV line begins. The line will be upgraded to 500/138kV double circuit. The route follows this corridor until it meets up with the Stonewall Substation. At this point the route follows the existing Stonewall to Millville 138kV line. This line will be rebuilt to 500/138kV for its entire length. After the Millville substation the route follows the Millville to Doubs 138kV transmission line. This line is rebuilt to 500/138kV until a few spans outside of the Doubs substation. The 500kV circuit diverges from the 138kV centerline and connects into the 500kV Doubs substation. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.

Terrain description

The terrain traversed by the project features rolling hills to mountainous slopes and segments of forested areas.

Right-of-way width by segment

The project will feature a right of way width of 175 feet for the green field portion of the project. The ROW will parallel existing corridor for the first ~31 miles (the greenfield portion). For the rebuild portion, the transmission line should fit in the existing corridor, however the transmission operator may decide to expand the right-of-way.

Electrical transmission infrastructure crossings

The proposed line will cross over the Black Oak to Bedington 500kV transmission line., The proposed line will cross over the Black Oak to Junction 138kV transmission line in two locations., The proposed line will cross over the Double Tollgate to Millville 138kV transmission line., The proposed line will cross over the Hampshire to Ridgeley 138kV transmission line in three locations., The proposed line will cross over the Mt Storm to Doubs 500kV transmission line in three locations.

Civil infrastructure/major waterway facility crossing plan

The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.

Environmental impacts

The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.

Tower characteristics

The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires. The preliminary design for the double circuit 500/138kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration for the 500kV circuit and davit arms and l-string insulators in a horizontal configuration for the 138kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 138kV transmission line will utilize a single 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires.

Construction responsibility

CONFIDENTIAL

Benefits/Comments

CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design

CONFIDENTIAL

Permitting / routing / siting

CONFIDENTIAL

ROW / land acquisition

CONFIDENTIAL

Materials & equipment

CONFIDENTIAL

Construction & commissioning

CONFIDENTIAL

Construction management

CONFIDENTIAL

Overheads & miscellaneous costs

CONFIDENTIAL

Contingency	CONFIDENTIAL
Total component cost	\$277,842,340.00
Component cost (in-service year)	\$355,157,433.00

Substation Upgrade Component

Component title	Front Royal Substation Upgrade
Project description	CONFIDENTIAL
Substation name	Front Royal
Substation zone	366
Substation upgrade scope	The substation scope will involve adding seven (7) new 5000A, 500kV breakers in a breaker and a half configuration to create five new line positions.

Transformer Information

None	
New equipment description	500kV Circuit Breakers (7): 5000A continuous current rating 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 4330 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to the accommodate the new line positions.
Real-estate description	The land surrounding the substation appears to be owned by the incumbent TO.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL

Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$33,418,023.00
Component cost (in-service year)	\$42,906,993.00

Substation Upgrade Component

Component title	BECO Substation Upgrade
Project description	CONFIDENTIAL
Substation name	BECO
Substation zone	352
Substation upgrade scope	The substation scope will involve adding three (3) new 5000A, 230kV breakers in a breaker and a half configuration to create two new line positions.

Transformer Information

None	
New equipment description	230kV Circuit Breakers (3): 5000A continuous current rating 230kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 5000A continuous current rating, 1992 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to the accommodate the new line positions.
Real-estate description	The land surrounding the substation appears to be available for expansion.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$5,672,934.00
Component cost (in-service year)	\$7,317,806.00

Greenfield Transmission Line Component

Component title	Hunterstown - Doubs Greenfield 500kV Transmission Line (Shared ROW)	
Project description	CONFIDENTIAL	
Point A	Hunterstown	
Point B	Doubs	
Point C		

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	

Nominal voltage	AC
Nominal voltage	500/230/138
Line construction type	Overhead
General route description	<p>The project starts at Hunterstown and heads south, paralleling the existing Hunterstown - Conastone corridor, for ~7 miles. The line continues south for approximately 3 miles and meets up with the existing Germantown - Taneytown 138kV transmission line outside the Germantown Substation. The rebuild of the 138kV line to 500/138kV begins outside the Germantown Substation. The route follows this 138kV corridor for approximately 13 miles. The line then has a short single circuit 500kV portion before meeting up with the existing Carroll to Mt Airy 230kV transmission line outside of the Carroll Substation. The route then follows and rebuilds the 230kV circuit into a 500/230kV circuit. This continues south for approximately 7.5 miles. The line then continues southwest for approximately 10 miles of new 500kV single circuit corridor before paralleling the existing Doubs to Brighton 500kV corridor for the remaining 25 miles. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.</p>
Terrain description	The terrain traversed by the project features farmland, rolling hills, and segments of forested areas.
Right-of-way width by segment	The project will feature a right of way width of 175 feet for the green field portion of the project. For the new 500kV single circuit construction, the ROW will parallel existing corridor for ~23 miles of the total ~36 miles. For the rebuild portion, the transmission line should fit in the existing corridor, however the transmission operator may decide to expand the right-of-way.
Electrical transmission infrastructure crossings	The proposed line will cross over the Catoclin to Carroll 138kV transmission line., The proposed line will cross over the Doubs to Brighton 500kV transmission line in five locations., The proposed line will cross over the Doubs to Pleasant View 500kV transmission line., The proposed line will cross over the Hunterstown to Conastone 500kV transmission line., The proposed line will cross over the Montgomery to Lime Kiln 230kV transmission line., The proposed line will cross over the Mt Airy to New Market 230kV transmission line.

Civil infrastructure/major waterway facility crossing plan

The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.

Environmental impacts

The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.

Tower characteristics

The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires. The preliminary design for the double circuit 500/138kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration for the 500kV circuit and davit arms and I-string insulators in a horizontal configuration for the 138kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 138kV transmission line will utilize a single 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires. The preliminary design for the double circuit 500/230kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a vertical configuration for the 500kV circuit and braced post insulators in a vertical configuration for the 230kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 230kV transmission line will utilize a double bundle 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires.

Construction responsibility

CONFIDENTIAL

Benefits/Comments

CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design

CONFIDENTIAL

Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$110,094,985.00
Component cost (in-service year)	\$140,731,079.00

Greenfield Transmission Line Component

Component title	Doubs - Goose Creek Greenfield 500kV Transmission Line (Shared ROW)
Project description	CONFIDENTIAL
Point A	Doubs
Point B	Goose Creek
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	
Nominal voltage	AC	
Nominal voltage	500/230/230	

Line construction type	Overhead
General route description	<p>The project starts at Doubs and heads south, paralleling the existing transmission line corridor that exists from Doubs to Dickerson, for ~10 miles. Once south of Dickerson, the existing Dickerson Station D to Pleasant View 230kV line will be rebuilt to 500/230kV. This is approximately 8 miles long. The line then adds the existing Pleasant View to Hamilton 230kV line onto it to become a 500/230/230kV rebuild. This continues until a few spans outside of the Pleasant View substation (approximately 0.9 miles). The 500kV circuit then branches off for a few spans to enter in the Goose Creek Substation. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.</p>
Terrain description	<p>The terrain traversed by the project features relatively flat farmland, rolling hills, and segments of forested areas.</p>
Right-of-way width by segment	<p>The project will feature a right of way width of 175 feet for the green field portion of the project. For the new 500kV single circuit construction, the ROW will parallel existing corridor for the majority of the length. For the rebuild portion, the transmission line should fit in the existing corridor, however the transmission operator may decide to expand the right-of-way.</p>
Electrical transmission infrastructure crossings	<p>The proposed line will cross over the Doubs to Aqueduct 230kV transmission line., The proposed line will cross over the Doubs to Dickerson Station H 230kV transmission line., The proposed line will cross over the Doubs to Pleasant View 500kV transmission line in two locations., The proposed line will cross over the Quince Orchard to Dickerson Station D 230kV transmission line.</p>
Civil infrastructure/major waterway facility crossing plan	<p>The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.</p>

Environmental impacts

The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.

Tower characteristics

The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires. The preliminary design for the double circuit 500/230kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a vertical configuration for the 500kV circuit and braced post insulators in a vertical configuration for the 230kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 230kV transmission line will utilize a double bundle 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires. The preliminary design for the triple circuit 500/230/230kV transmission line utilizes tubular steel h-frame structures with davit arms and v-string insulators in a horizontal configuration for the 500kV circuit and braced post insulators in a vertical configuration on each pole for the 230kV circuits. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 230kV transmission lines will utilize a double bundle 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires.

Construction responsibility

CONFIDENTIAL

Benefits/Comments

CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design

CONFIDENTIAL

Permitting / routing / siting

CONFIDENTIAL

ROW / land acquisition

CONFIDENTIAL

Materials & equipment

CONFIDENTIAL

Construction & commissioning

CONFIDENTIAL

Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$52,451,634.00
Component cost (in-service year)	\$67,047,331.00

Greenfield Transmission Line Component

Component title	Front Royal - Vint Hill Greenfield 500kV Transmission Line
Project description	CONFIDENTIAL
Point A	Front Royal
Point B	Vint Hill
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW MA3	
Nominal voltage	AC	
Nominal voltage	500	
Line construction type	Overhead	

General route description

The Front Royal - Vint Hill transmission line begins at Front Royal and follows the existing 500kV corridor to the southeast. The route continues to follow this existing corridor until it meets up with the Remington substation. At this point the route parallels the existing Remington CT to Gainesville 230kV corridor. The route parallels this corridor all the way to the Vint Hill Substation. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.

Terrain description

The terrain traversed by the project features rolling hills to mountainous slopes and segments of forested areas.

Right-of-way width by segment

The project will feature a right of way width of 175 feet for the project route. The ROW will parallel existing corridor for the majority of the route.

Electrical transmission infrastructure crossings

The proposed line will cross over the Front Royal to Morrisville 500kV transmission line in two locations., The proposed line will cross over the Meadow Brook to Loudoun 500kV transmission line., The proposed line will cross over the Remington CT to Gainesville 230kV transmission line., The proposed line will cross over the Remington CT to Marsh Run 230kV transmission line., The proposed line will cross over the Remington CT to Warrenton 230kV transmission line., The proposed line will cross over the Remington to Remington CT 230kV transmission line., The proposed line will cross over the Riverton to Double Tollgate 138kV transmission line.

Civil infrastructure/major waterway facility crossing plan

The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.

Environmental impacts	The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.
Tower characteristics	The preliminary design for the single circuit transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a delta configuration. The transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and two optical groundwires.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$403,700,693.00
Component cost (in-service year)	\$516,038,345.00

Greenfield Transmission Line Component

Component title Conastone - North Delta Greenfield 500kV Transmission line (Shared ROW)

Project description CONFIDENTIAL

Point A Conastone

Point B North Delta

Point C

	Normal ratings	Emergency ratings
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Summer (MVA)	4330.000000	4330.000000
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Winter (MVA)	4330.000000	4330.000000
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Conductor size and type Triple Bundle 1272 Bittern ACSS/TW MA3

Nominal voltage AC

Nominal voltage 500/230

Line construction type Overhead

General route description The project starts at Conastone Substation and heads in east in the existing corridor to the Graceton Substation. The existing double circuit Conastone to Graceton 230kV transmission line and single circuit Conastone to Peach Bottom 500kV transmission line will be taken down and replaced with double circuit 500/230kV transmission lines. The Conastone to Peach Bottom rebuild is covered in the "Conastone - Peach Bottom Rebuild" component. After the Graceton Substation, the route and rebuild continues north in this existing corridor until the new 500kV circuit exits the corridor to loop into the North Delta Substation. See Plan and Profile drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.

Terrain description	The terrain traversed by the project features relatively farmland, rolling hills, and cleared right-of-way.
Right-of-way width by segment	The transmission line should fit in the existing corridor, however the transmission operator may decide to expand the right-of-way.
Electrical transmission infrastructure crossings	The proposed line will cross over the Conastone to Peach Bottom 500kV transmission line., The proposed line will cross over the Five Forks to Rock Ridge 115kV transmission line., The proposed line will cross over the Raphael Road to Graceton 230kV transmission line.
Civil infrastructure/major waterway facility crossing plan	The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.
Environmental impacts	The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.
Tower characteristics	The preliminary design for the double circuit 500/230kV transmission line utilizes tubular steel monopole structures with davit arms and v-string insulators in a vertical configuration for the 500kV circuit and braced post insulators in a vertical configuration for the 230kV circuit. The 500kV transmission line will utilize triangular spaced triple-bundle 1272 kcmil "Bittern" ACSS/TW MA3 conductor and the 230kV transmission line will utilize a double bundle 1272 kcmil "Bittern" ACSS/TW MA3. The structure will contain two optical groundwires.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$77,263,387.00
Component cost (in-service year)	\$98,763,443.00

Greenfield Transmission Line Component

Component title	Goose Creek - Beaumeade Greenfield Underground 500kV Double Circuit Transmission Line	
Project description	CONFIDENTIAL	
Point A	Goose Creek	
Point B	Beaumeade	
Point C		

	Normal ratings	Emergency ratings
Summer (MVA)	1154.000000	1789.000000
Winter (MVA)	1154.000000	1789.000000
Conductor size and type	500kV	
Nominal voltage	AC	

Nominal voltage	Single Core 2500m ² Copper 500kV XLPE Cable
Line construction type	Underground
General route description	The project follows a walking trail from the Goose Creek Substation to the Beaumeade Substation. This path should provide for a lesser impact to the community than going through roads while also reducing the number of underground utility crossings. See "Goose Creek - Beaumeade v3-UGR" drawing attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out environmental and detailed engineering work in order to establish a highly- detailed Project plan to support the siting applications.
Terrain description	The terrain traversed by the project features a walking trail with little to no utilities. Fair clayey soil conditions are expected with a chance for some rock along the route.
Right-of-way width by segment	The project will feature a right of way width of 8 feet for the majority of the project route. In instances where trenchless crossings are required, this may increase.
Electrical transmission infrastructure crossings	No EHV electrical transmission infrastructure crossings are anticipated
Civil infrastructure/major waterway facility crossing plan	The proposer will secure crossing and encroachment permits, authorizations and agreements for existing linear infrastructure crossed by the project. The proposer will coordinate with easement holders including; municipal and county roads; oil and gas pipelines; transmission lines, and local distribution utilities (power, sewer, water, gas, fiber, etc.) to not interfere with existing easement rights crossed by the project. The proposer will obtain occupation agreements from municipal and county jurisdictions to place transmission facilities over municipal and country roads. The proposer plans to secure crossing agreements with existing oil and gas pipelines and transmission lines.

Environmental impacts	The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Proposer expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Proposer will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Proposer has identified other permits which may be required for the construction of the Project. Proposer considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.
Tower characteristics	There are no tower associated with this underground transmission line. There will be substation riser structures at either end of the line.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL
Component Cost Details - In Current Year \$	
Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$161,926,338.00
Component cost (in-service year)	\$206,985,524.00

Transmission Line Upgrade Component

Component title	Peach Bottom - North Delta Reconductor
Project description	CONFIDENTIAL
Impacted transmission line	Peach Bottom - North Delta
Point A	Peach Bottom
Point B	North Delta
Point C	
Terrain description	The terrain is a mainly farm fields. The work will all happen in existing right of way.

Existing Line Physical Characteristics

Operating voltage	500
Conductor size and type	N/A
Hardware plan description	N/A
Tower line characteristics	N/A

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4330.000000	4330.000000
Winter (MVA)	4330.000000	4330.000000
Conductor size and type	Triple Bundle 1272 Bittern ACSS/TW	
Shield wire size and type	N/A	

Rebuild line length	2.5 miles
Rebuild portion description	The line will be reconducted from the Peach Bottom substation to the North Delta substation. New structures are not anticipated to be needed.
Right of way	No new right of way is anticipated. The existing right of way has adequate space.
Construction responsibility	CONFIDENTIAL
Benefits/Comments	CONFIDENTIAL

Component Cost Details - In Current Year \$

Engineering & design	CONFIDENTIAL
Permitting / routing / siting	CONFIDENTIAL
ROW / land acquisition	CONFIDENTIAL
Materials & equipment	CONFIDENTIAL
Construction & commissioning	CONFIDENTIAL
Construction management	CONFIDENTIAL
Overheads & miscellaneous costs	CONFIDENTIAL
Contingency	CONFIDENTIAL
Total component cost	\$2,875,001.00
Component cost (in-service year)	\$3,675,025.00

Congestion Drivers

None

Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1662	235471	01GORE	235512	01STONEW	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1662	235471	01GORE	235512	01STONEW	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST95	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-GD-S779	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-N1-ST96	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST97	235503	01REID	235505	01RINGLD	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST98	314009	6BRADOCK	314052	6IDYLOWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1657	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S1658	314084	6SULLY	314035	6DISCOVR	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1659	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST89	314009	6BRADOCK	314052	6IDYLOWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST90	235101	01BEDNGT	235445	01BEDNGT	2	500/138	201/201	Summer N-1 Thermal	Included
2022W3-GD-S1660	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S70	235503	01REID	235505	01RINGLD	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST91	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST92	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-GD-S1662	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST93	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-GD-S73	223938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-N1-ST94	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-GD-S72	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-GD-S2019	314041	6GLEBE	314185	6RADNOR	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S84	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S85	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST100	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-N1-ST103	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST108	313752	6TAKEOFF	313774	6LINC PRK	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S780	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S76	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST99	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S78	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST100	313393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST101	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-S1663	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST102	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-S1665	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-S1666	04539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST103	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-S1667	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-ST104	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-N1-ST105	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-S83	314041	6GLEBE	314185	6RADNOR	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1671	04530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S94	235523	01BETHEL+	235507	01RIVERT	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S95	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S96	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST110	313393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST111	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST112	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1668	13869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST109	221092	FIVE.FOR	221096	ROCKRGE1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-GD-S1669	04530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-N1-ST113	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S88	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST114	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S89	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST11	214009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST11	235101	01BEDNGT	235445	01BEDNGT	4	500/138	201/201	Summer N-1 Thermal	Included
2022W3-GD-S167	014749	6CHARLVL	314772	6PROFFIT	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S91	223938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-N1-ST11	414039	6GALLOWES A	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S90	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-N1-ST11	514068	6OX	314039	6GALLOWES A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST11	0207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-N1-ST12	221092	FIVE.FOR	221096	ROCKRGE1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-N1-ST13	014006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST12	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT13	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT13	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT14	013752	6TAKEOFF	313774	6LINC PRK	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-S97	207922	BRIS	204515	27YORKANA	1	230	227/229	Summer Gen Deliv	Included
2022W3-N1-ST12	013393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S167	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST12	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S167	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-N1-WT13	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST12	213815	6SPRINGH	314079	6RESTON	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S167	013904	6GOOSECRK	314006	6ASHBURA	1	230	345	Summer Gen Deliv	Included
2022W3-N1-WT13	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST12	313393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S103	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-WT13	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST12	413393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S104	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST125	14006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST126	14068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST127	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST132	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-N1-ST142	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-N1-ST143	13393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT142	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Winter N-1 Thermal	Included
2022W3-N1-ST133	14006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST133	14035	6DISCOVR	313774	6LINC PRK	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST133	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-N1-WT143	13399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST134	14916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST135	235503	01REID	235505	01RINGLD	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST136	235187	01GRANDP	235180	01FAYETT	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST137	14068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST138	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST143	14009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST153	14009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT163	14006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST153	14925	8PL VIEW	314072	6PL VIEW	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST152	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT162	242514	05J.FERR	242684	05J.FERR	3	765/138	205/205	Winter N-1 Thermal	Included
2022W3-N1-WT163	14006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST143	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT153	14006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST143	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT152	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Winter N-1 Thermal	Included
2022W3-N1-ST144	14925	8PL VIEW	314072	6PL VIEW	1	500/230	345/345	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST145	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST146	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT153	14916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST147	14068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST148	13805	6SHELLHORN1	314098	6GREENWAY1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT153	14916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST152	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST162	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST163	14072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST162	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W956	214084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included
2022W3-N1-ST163	14072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST152	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT162	35483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST154	14925	8PL VIEW	314072	6PL VIEW	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST152	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT162	35471	01GORE	235512	01STONEW	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST152	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST152	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT162	35483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST152	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT162	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Winter N-1 Thermal	Included
2022W3-N1-WT163	14068	6OX	314039	6GALLOWS A	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST163	13399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	13399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	14039	6GALLOWS A	314052	6IDYLVOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST172	13393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST173	313743	6INTERCONNEC	313733	6NIMBUS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST174	314039	6GALLOWS A	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W153	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-ST164	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W147	313399	6MARS	313746	6SOJOURNER	1	230	345	Winter Gen Deliv	Included
2022W3-N1-ST165	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST166	235503	01REID	235505	01RINGLD	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST167	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST168	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W139	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT179	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W156	200762	26GARRETT	235470	01GARRET	1	115	226/201	Winter Gen Deliv	Included
2022W3-N1-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W97	204515	27YORKANA	208048	OTCR	1	230	227/229	Winter Gen Deliv	Included
2022W3-N1-ST175	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST176	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W163	314004	6ASHBURN	314010	6BEAMEAD	1	230	345	Winter Gen Deliv	Included
2022W3-N1-WNC7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST178	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-WNC8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W1407	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WNC10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W172	235120	01ALBRIG	235492	01MTZION	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W173	235120	01ALBRIG	235492	01MTZION	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W1002	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Winter Gen Deliv	Included
2022W3-N1-WNC13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W987	200065	PCHBTM2S	200064	PCHBTM1S	Z2	500	230	Winter Gen Deliv	Included
2022W3-N1-WNC17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W991	242701	05LEESVI	314667	4ALTVSTA	1	138	205/345	Winter Gen Deliv	Included
2022W3-N1-WNC19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W992	200065	PCHBTM2S	200064	PCHBTM1S	Z1	500	230	Winter Gen Deliv	Included
2022W3-N1-WNC20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W993	242701	05LEESVI	314667	4ALTVSTA	1	138	205/345	Winter Gen Deliv	Included
2022W3-N1-WNC22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W190	235469	01GARRET	235449	01CARLOS	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WNC24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W1003	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-N1-WNC25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1813	1313805	6SHELLHORN1	313841	6ENTERPRIS	1	230	345	Summer Gen Deliv	Included
2022W3-N1-WNC35	35A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-S1812	1235596	01VASC T	235173	01EDGEWT	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W1923	2313805	6SHELLHORN1	314098	6GREENWAY1	1	230	345	Winter Gen Deliv	Included
2022W3-N1-WNC36	36A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-S3612	1235105	01DOUBS	235459	01DOUBS	1	500/230	201	Summer Gen Deliv	Included
2022W3-GD-W1022	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-N1-WNC37	37A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W1012	123938	DICKH230	223937	DICK 230	1	230	233	Winter Gen Deliv	Included
2022W3-N1-WNC27	27A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W1002	023938	DICKH230	223937	DICK 230	2	230	233	Winter Gen Deliv	Included
2022W3-N1-WNC28	28A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC29	29A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W1831	314991	8VALLEY SC	314926	8VALLEY	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WNC30	30A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-W1013	1313440	8VINTHIL	314125	6VINTHIL	2	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W1912	1235469	01GARRET	235449	01CARLOS	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WNC41	41A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC42	42A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC43	43A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC44	44A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-S1812	1235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD-W1523	2313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WNC45	45A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-S3712	1235458	01DOUBS	235459	01DOUBS	5	138/230	201	Summer Gen Deliv	Included
2022W3-N1-WNC46	46A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-S8622	2235105	01DOUBS	235459	01DOUBS	2	500/230	201	Summer Gen Deliv	Included
2022W3-GD-W7982	8214290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Winter Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-WNC47A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-GD-S372244446	05SOAPSTONE	242792	05SCOTSV	1	138	205	Summer Gen Deliv	Included	
2022W3-GD-W793114290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Winter Gen Deliv	Included	
2022W3-N1-WNC48A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included	
2022W3-GD-S181314918	8NO ANNA	314911	8LADYSMITH	1	500	345	Summer Gen Deliv	Included	
2022W3-N1-WNC49A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included	
2022W3-GD-S365235110	01MDWBRK	313440	8VINTHIL	1	500	201/345	Summer Gen Deliv	Included	
2022W3-N1-WNC50A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included	
2022W3-GD-S181523938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included	
2022W3-N1-WNC40A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included	
2022W3-GD-S181623938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included	
2022W3-GD-S181714068	6OX	314039	6GALLOWS A	1	230	345	Summer Gen Deliv	Included	
2022W3-GD-S1819235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included	
2022W3-GD-S384314138	6MINE RD	314137	6FREDBRG	1	230	345	Summer Gen Deliv	Included	
2022W3-N1-WT18205463	01TANEY	235450	01CARROL	1	138/138	201/201	Winter N-1 Thermal	Included	
2022W3-N1-WT18205492	01MTZION	235518	01WESTVA	1	138/138	201/201	Winter N-1 Thermal	Included	
2022W3-N1-WT19204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Winter N-1 Thermal	Included	
2022W3-N1-WT19205518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Winter N-1 Thermal	Included	
2022W3-N1-WNC49A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included	
2022W3-GD-W791523938	DICKH230	223937	DICK 230	2	230	233	Winter Gen Deliv	Included	
2022W3-GD-S182013440	8VINTHIL	314913	8LOUDOUN	1	500	345	Summer Gen Deliv	Included	
2022W3-N1-WNC50A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included	
2022W3-GD-S212314138	6MINE RD	314137	6FREDBRG	1	230	345	Summer Gen Deliv	Included	
2022W3-GD-S382314138	6MINE RD	314137	6FREDBRG	1	230	345	Summer Gen Deliv	Included	
2022W3-GD-S182220961	NWEST326	220973	GRANITE6	1	230	232	Summer Gen Deliv	Included	
2022W3-N1-WT18205483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included	
2022W3-GD-W3 205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included	
2022W3-N1-WT3 205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included	

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-WT1	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-W74	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-N1-WT4	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W74	235471	01GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT2	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-W4	235471	01GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT1	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-W5	235471	01GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT7	235471	01GORE	235512	01STONEW	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT2	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-W75	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT8	235471	01GORE	235512	01STONEW	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT2	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-N1-WT1	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT1	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W74	235471	01GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT1	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT1	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT1	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-N1-WT1	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-N1-WT1	2314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-W76	235187	01GRANDP	235180	01FAYETT	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT1	3314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT1	235101	01BEDNGT	235445	01BEDNGT	2	500/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W12	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-W1	2313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W15	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S105	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included

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2022W3-GD-W1	213440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT1	5314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-S11	10207922	BRIS	204515	27YORKANA	1	230	227/229	Summer Gen Deliv	Included
2022W3-GD-W16	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W1	413440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT1	6314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-W77	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S167	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W1	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT1	7314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W3	535504	01RIDGLY	235484	01MESSCK	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W19	207922	BRIS	204515	27YORKANA	1	230	227/229	Winter Gen Deliv	Included
2022W3-GD-S168	814925	8PL VIEW	314072	6PL VIEW	1	500/230	345	Summer Gen Deliv	Included
2022W3-N1-WT1	8314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W77	5235105	01DOUBS	235459	01DOUBS	1	500/230	201	Winter Gen Deliv	Included
2022W3-GD-W3	435504	01RIDGLY	235484	01MESSCK	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S168	313399	6MARS	313805	6SHELLHORN1	1	230	345	Summer Gen Deliv	Included
2022W3-N1-WT1	9314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT1	1235471	01GORE	235512	01STONEW	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W75	235592	01HAMPS1	235471	01GORE	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT2	0228938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-N1-WT1	0235471	01GORE	235512	01STONEW	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT2	0228938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-W13	6314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT2	0228938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-W23	235050	AD2-180 TAP	235501	01PARRN	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT2	3204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Winter N-1 Thermal	Included
2022W3-GD-S81	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W786	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT24	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W792	235503	01REID	235505	01RINGLD	1	138	201	Winter Gen Deliv	Included
2022W3-N1-LLT52	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Light Load N-1	Included
2022W3-GD-S1182	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1683	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT25	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W792	235523	01BETHEL+	235507	01RIVERT	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT26	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-S1682	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S1217	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W792	235523	01BETHEL+	235507	01RIVERT	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT27	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-LLT52	244423	05JAMES RIVR	244446	05SOAPSTONE	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-S1682	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S1418	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S114	235101	01BEDNGT	235445	01BEDNGT	2	500/138	201	Summer Gen Deliv	Included
2022W3-GD-W792	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1232	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-N1-WT28	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W792	235101	01BEDNGT	235445	01BEDNGT	2	500/138	201	Winter Gen Deliv	Included
2022W3-N1-WT29	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-LLT52	244423	05JAMES RIVR	244446	05SOAPSTONE	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-ST244	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1	Included
2022W3-GD-S1687	223938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-N1-WT30	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-LLT52	244423	05JAMES RIVR	244446	05SOAPSTONE	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-W28	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1682	23938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-GD-S1468	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-N1-WT213	13393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT223	13393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W780	235592	01HAMPS1	235471	01GORE	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1682	204514	27TMI	204502	27JACKSON	1	230	227	Summer Gen Deliv	Included
2022W3-N1-WT202	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Winter N-1 Thermal	Included
2022W3-GD-W806	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-S1122	235523	01BETHEL+	235507	01RIVERT	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W781	235187	01GRANDP	235180	01FAYETT	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W319	13440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S1132	235523	01BETHEL+	235507	01RIVERT	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W22	235050	AD2-180 TAP	235501	01PARRN	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S762	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1682	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S422	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W35	235446	01BLACKO	235103	01BLACKO	3	138/500	201	Winter Gen Deliv	Included
2022W3-N1-ST249	23938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1	Included
2022W3-GD-S1692	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-W38	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-N1-ST248	23938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1	Included
2022W3-GD-W39	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1192	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST258	14004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1	Included
2022W3-GD-W40	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S2032	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-ST250	23938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1	Included
2022W3-N1-LLT63	244446	05SOAPSTONE	242792	05SCOTSV	1	138/138	205/205	Light Load N-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W41	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-N1-ST2531	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1	Included
2022W3-GD-W802	235101	01BEDNGT	235445	01BEDNGT	4	500/138	201	Winter Gen Deliv	Included
2022W3-N1-LLT62	244446	05SOAPSTONE	242792	05SCOTSV	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-S1693	14006	6ASHBURA	314010	6BEAMEAD	1	230	345	Summer Gen Deliv	Included
2022W3-N1-ST2521	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1	Included
2022W3-GD-S1252	204529	27GERMANTN	204530	27GERMANTN	1	115/138	227	Summer Gen Deliv	Included
2022W3-GD-W42	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST2551	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1	Included
2022W3-GD-S1692	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-N1-LLT64	244446	05SOAPSTONE	242792	05SCOTSV	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-W43	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST2531	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1	Included
2022W3-GD-W36	235446	01BLACKO	235103	01BLACKO	3	138/500	201	Winter Gen Deliv	Included
2022W3-GD-W29	235463	01TANEY	235450	01CARROL	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1689	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-N1-ST2462	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1	Included
2022W3-N1-LLT52	244446	05SOAPSTONE	242792	05SCOTSV	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-W31	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-N1-ST2452	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1	Included
2022W3-GD-S1692	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-GD-S1692	214084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-N1-ST2472	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1	Included
2022W3-GD-W81	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S1693	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Summer Gen Deliv	Included
2022W3-N1-ST2531	314316	6LOCKS	314314	3LOCKS	2	230/115	345/345	Summer N-1	Included
2022W3-GD-W81	235503	01REID	235505	01RINGLD	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1352	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST257	314316	6LOCKS	314314	3LOCKS	2	230/115	345/345	Summer N-1	Included
2022W3-GD-S1692	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2022W3-GD_118	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Light Load Gen Deliv	Included
2022W3-GD-W49	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-S1692	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W822	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST257	314316	6LOCKS	314314	3LOCKS	2	230/115	345/345	Summer N-1	Included
2022W3-GD-S1700	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W822	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W50	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD_117	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Light Load Gen Deliv	Included
2022W3-GD-S1703	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S1362	235101	01BEDNGT	235445	01BEDNGT	4	500/138	201	Summer Gen Deliv	Included
2022W3-GD-W51	214084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included
2022W3-GD-S1392	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-W1367	314041	6GLEBE	314185	6RADNOR	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W45	235592	01HAMPS1	235471	01GORE	1	138	201	Winter Gen Deliv	Included
2022W3-N1-ST257	314316	6LOCKS	314314	3LOCKS	2	230/115	345/345	Summer N-1	Included
2022W3-GD-W46	235592	01HAMPS1	235471	01GORE	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W44	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S1272	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD_128	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Light Load Gen Deliv	Included
2022W3-GD-S1692	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD_122	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Light Load Gen Deliv	Included
2022W3-GD-S1698	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W55	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1703	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W56	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Winter Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1705	14072	6PL VIEW	314004	6ASHBURN	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W83	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S1472	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W83	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S1706	14009	6BRADOCK	314052	6IDYLWOD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1707	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W57	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W13	235504	01RIDGLY	235593	01HAMPS2	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1522	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W58	204538	27STRABAN	204529	27GERMANTN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S1552	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S2038	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-W82	314041	6GLEBE	314185	6RADNOR	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W53	235492	01MTZION	235518	01WESTVA	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1412	235453	01CHERYR	235517	01HARMNY	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W52	235492	01MTZION	235518	01WESTVA	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1702	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1703	14035	6DISCOVR	313774	6LINC PRK	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W84	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1711	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S1642	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-W59	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-S1653	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W60	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W61	237310	01DANSMTN	235504	01RIDGLY	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S2041	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W62	237310	01DANSMTN	235504	01RIDGLY	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1711	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W849	204538	27STRABAN	204529	27GERMANTN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S1712	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1672	242563	05BOXWD	242603	05CLIFFR	1	138	205	Summer Gen Deliv	Included
2022W3-GD-S1712	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-W849	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W1370	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W849	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S1712	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1712	235187	01GRANDP	235180	01FAYETT	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W849	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S1702	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S2047	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-S1712	235503	01REID	235505	01RINGLD	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S2050	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1722	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1722	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1722	213399	6MARS	313805	6SHELLHORN1	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1712	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included
2022W3-GD-S1712	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1712	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1722	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1722	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1722	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1882	214084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-GD-S1902	242563	05BOXWD	242603	05CLIFFR	1	138	205	Summer Gen Deliv	Included
2022W3-GD-S2052	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-LLT1	242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-S1722	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S172204544	27204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-LLT1242651	242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-S172513815	2513815	6SPRINGH	314079	6RESTON	1	230	345	Summer Gen Deliv	Included
2022W3-N1-LLT1242651	242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-S173200064	3200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-LLT12442638	442638	05FIELDALE1	242831	05THORNT	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-S201200004	1200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S202200004	2200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S214214084	4214084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-GD-S2052435505	52435505	01RINGLD	237323	01GARFIELD	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S172204544	27204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-LLT12314041	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT1242651	242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included
2022W3-GD-S200314939	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-N1-LLT12314041	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT12314041	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load N-1	Included
2022W3-GD-S173813399	3813399	6MARS	313746	6SOJOURNER	1	230	345	Summer Gen Deliv	Included
2022W3-LD-SNC2N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S221214084	221214084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-LD-SNC1N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S222313393	2313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-LD-SNC4N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S173914916	3914916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-LD-SNC3N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-LD-SNC5N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S173204538	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S173223937	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included
2022W3-LD-ST1 223938	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Load Deliverability	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1730	23937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included
2022W3-GD-S1733	14004	6ASHBURN	314010	6BEAMEAD	1	230	345	Summer Gen Deliv	Included
2022W3-LD-ST3	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Load Deliverability	Included
2022W3-GD-S2052	37323	01GARFIELD	235452	01CATOCT	1	138	201	Summer Gen Deliv	Included
2022W3-LD-ST2	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST11	200004	CNASTONE	200064	PCHBTM1S	1	500/500	232/230	Load Deliverability	Included
2022W3-LD-ST10	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Load Deliverability	Included
2022W3-LD-ST13	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-LD-ST12	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-LD-ST5	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST4	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST7	223937	DICK 230	314290	6EDFERRY	1	230/230	233/345	Load Deliverability	Included
2022W3-LD-ST6	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST9	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Load Deliverability	Included
2022W3-LD-ST8	223937	DICK 230	314290	6EDFERRY	1	230/230	233/345	Load Deliverability	Included
2022W3-N1-ST183	14912	8LEXNGTN	314856	6LEXNGT2	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST184	208071	SAHA34TP	208069	PPL-BGE TIE	1	230/230	229/229	Summer N-1 Thermal	Included
2022W3-N1-ST185	13399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST186	13399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST187	14039	6GALLOWS A	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST179	14039	6GALLOWS A	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST180	14919	8OX	314068	6OX	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST181	14925	8PL VIEW	314072	6PL VIEW	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST182	14925	8PL VIEW	314072	6PL VIEW	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST194	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST195	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST196	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST197	235105	01DOUBS	235459	01DOUBS	3	500/230	201/201	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST19	313393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST18	204538	27STRABAN	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST19	235187	01GRANDP	235180	01FAYETT	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST19	314009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST19	313746	6SOJOURNER	313822	6RUNWAY	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST20	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST20	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST20	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST20	313746	6SOJOURNER	313822	6RUNWAY	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST19	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST20	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST20	223937	DICK 230	314290	6EDFERRY	1	230/230	233/345	Summer N-1 Thermal	Included
2022W3-N1-ST20	213846	NOTTREAC	213869	PCHBTMP	1	230/230	230/230	Summer N-1 Thermal	Included
2022W3-N1-ST20	213844	NOTTINGHM	213846	NOTTREAC	1	230/230	230/230	Summer N-1 Thermal	Included
2022W3-N1-ST20	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST21	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST21	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST21	235105	01DOUBS	235459	01DOUBS	3	500/230	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST20	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST21	235105	01DOUBS	235459	01DOUBS	3	500/230	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST21	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST21	221090	GLENARM2	221089	WINDYED1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-N1-ST21	314925	8PPL VIEW	314072	6PL VIEW	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST21	314912	8LEXNGTN	314854	6LEXNGT1	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST21	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST22	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST22	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC	57A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST222	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC58A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC59A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC60A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST219	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST220	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST221	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC51A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST222	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC52A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST223	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC53A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST224	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC54A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST225	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC55A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST226	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WNC56A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST239	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST240	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST238	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC68A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC69A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-WNC70A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST230	235105	01DOUBS	235459	01DOUBS	3	500/230	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST231	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Summer N-1 Thermal	Included
2022W3-N1-WNC61A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST232	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-WNC02A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST232	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WNC03A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST232	208071	SAHA34TP	208069	PPL-BGE TIE	1	230/230	229/229	Summer N-1 Thermal	Included
2022W3-N1-WNC04A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST232	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC05A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST232	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-WNC06A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST232	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-WNC07A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-SNC6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-SNC7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-ST9	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-SNC8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-ST7	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST8	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST242	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-WNC7A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST242	313815	6SPRINGH	314079	6RESTON	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WNC7A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Winter N-1 Non Converge	Included
2022W3-N1-ST242	313805	6SHELLHORN1	313841	6ENTERPRIS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-SNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-ST3	235105	01DOUBS	235459	01DOUBS	3	500/230	201/201	Summer N-1 Thermal	Included
2022W3-N1-SNC2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-ST4	235105	01DOUBS	235459	01DOUBS	1	500/230	201/201	Summer N-1 Thermal	Included
2022W3-N1-SNC3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-SNC4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST6	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-SNC5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-GD_L11	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-N1-ST19	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD_L12	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-N1-ST20	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Summer N-1 Thermal	Included
2022W3-N1-ST18	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST10	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-SNC9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-ST11	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-SNC10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-ST12	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Summer N-1 Non Converge	Included
2022W3-N1-ST13	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST14	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST15	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST16	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST17	314084	6SULLY	314035	6DISCOVR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD_L26	9314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD_L30	9314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD_L31	1235105	01DOUBS	235459	01DOUBS	3	500/230	201/201	Light Load Gen Deliv	Included
2022W3-N1-ST29	235471	01GORE	235512	01STONEW	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST30	235471	01GORE	235512	01STONEW	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT41	1235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST31	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT39	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT40	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT31	1235101	01BEDNGT	235445	01BEDNGT	4	500/138	201/201	Winter N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD_L35	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-N1-ST21	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Summer N-1 Thermal	Included
2022W3-GD_L36	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-N1-WT32	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST22	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT33	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST23	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT34	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST24	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT35	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST25	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT36	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST26	314010	6BEAMEAD	313743	6INTERCONNEC	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST27	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT37	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT38	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST28	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST39	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST40	204544	27LINCOLN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT51	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST41	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST42	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT52	2314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT53	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT42	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST32	235471	01GORE	235512	01STONEW	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST33	235471	01GORE	235512	01STONEW	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT43	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-WT44	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST34	314925	8PL VIEW	314072	6PL VIEW	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-GD_L81	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-N1-ST35	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT45	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT46	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST36	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT47	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST37	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST38	314084	6SULLY	314035	6DISCOVR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT48	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT49	313393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST49	314035	6DISCOVR	313774	6LINC PRK	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST50	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST51	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT62	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST52	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT63	235101	01BEDNGT	235445	01BEDNGT	1	500/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST53	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT53	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST43	313393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST44	313393	8MARS	313399	6MARS	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT54	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT55	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST45	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT56	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST46	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT57	314010	6BEAMEAD	313743	6INTERCONN	1	230/230	345/345	Winter N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST47	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT58	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST48	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT59	235101	01BEDNGT	235445	01BEDNGT	3	500/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT60	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST59	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST60	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST61	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT71	313393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT72	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST62	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST63	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W850	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W851	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-N1-ST64	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-N1-WT74	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT64	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST54	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT65	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST55	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST56	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST57	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT67	313393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST58	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT68	313393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT70	313393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST69	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST70	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST71	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST72	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST73	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W73	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-N1-ST74	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W74	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-N1-WT85	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT75	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W63	204514	27TMI	204502	27JACKSON	1	230	227	Winter Gen Deliv	Included
2022W3-N1-ST65	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-N1-WT76	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W64	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Winter Gen Deliv	Included
2022W3-N1-ST66	314009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT77	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W65	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-N1-ST67	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT78	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W68	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-N1-ST68	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT79	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W67	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W86	235101	01BEDNGT	235445	01BEDNGT	3	500/138	201	Winter Gen Deliv	Included
2022W3-GD-W72	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W71	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT92	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W78	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-N1-WT93	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-W80	235483	01MDWBRK	235444	01BART 1	1	138	201	Winter Gen Deliv	Included

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2022W3-N1-WT94	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W79	235483	01MDWBRK	235444	01BART 1	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT95	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-W88	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-WT96	313393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W87	235101	01BEDNGT	235445	01BEDNGT	1	500/138	201	Winter Gen Deliv	Included
2022W3-N1-WT86	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST77	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT88	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W75	313399	6MARS	313805	6SHELLHORN1	1	230	345	Winter Gen Deliv	Included
2022W3-N1-ST78	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W87	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-WT89	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT90	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W76	313904	6GOOSECRK	314006	6ASHBURA	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W77	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W87	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-WT101	313393	8MARS	313399	6MARS	1	500/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT102	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT103	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W86	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-N1-WT104	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W88	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-W90	235501	01PARRN	235479	01JUNCTN	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W89	235501	01PARRN	235479	01JUNCTN	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT105	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W88	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W87	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included

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2022W3-N1-WT9	7313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W82	200762	26GARRETT	235470	01GARRET	1	115	226/201	Winter Gen Deliv	Included
2022W3-GD-W83	204515	27YORKANA	208048	OTCR	1	230	227/229	Winter Gen Deliv	Included
2022W3-GD-W84	235471	01GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-N1-WT100	7313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W88	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-W85	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-N1-WT112	235479	01JUNCTN	235467	01FRNCHM	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-WT112	235479	01JUNCTN	235467	01FRNCHM	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W89	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W89	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-S174	235187	01GRANDP	235180	01FAYETT	1	138	201	Summer Gen Deliv	Included
2022W3-N1-WT112	235479	01JUNCTN	235467	01FRNCHM	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W93	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-N1-WT112	235479	01JUNCTN	235467	01FRNCHM	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-S206	221090	GLENARM2	221089	WINDYED1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-W94	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W89	207922	BRIS	204515	27YORKANA	1	230	227/229	Winter Gen Deliv	Included
2022W3-GD-S174	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S174	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Summer Gen Deliv	Included
2022W3-N1-WT112	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-W95	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W13	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W92	314006	6ASHBURA	314010	6BEAMEAD	1	230	345	Winter Gen Deliv	Included
2022W3-N1-WT109	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W89	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-N1-WT113	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W89	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included

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2022W3-GD-W1240	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-W1023	235483	01MDWBRK	235444	01BART 1	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S2363	13393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W1023	235483	01MDWBRK	235444	01BART 1	1	138	201	Winter Gen Deliv	Included
2022W3-LD-ST15	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-GD-S2373	13393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-LD-ST14	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-GD-W1031	14072	6PL VIEW	314004	6ASHBURN	1	230	345	Winter Gen Deliv	Included
2022W3-N1-WT123	14006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-S2402	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD-W9032	07922	BRIS	204515	27YORKANA	1	230	227/229	Winter Gen Deliv	Included
2022W3-LD-ST17	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-LD-ST16	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-GD-W9043	13440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S1742	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W96	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-S1742	235592	01HAMPS1	235471	01GORE	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W902	13869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S1742	235592	01HAMPS1	235471	01GORE	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W97	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S2312	242603	05CLIFFR	242613	05COLLEEN SS	1	138	205	Summer Gen Deliv	Included
2022W3-GD-W98	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-S2322	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included
2022W3-GD-S1752	204529	27GERMANTN	204530	27GERMANTN	1	115/138	227	Summer Gen Deliv	Included
2022W3-GD-W104	200762	26GARRETT	235470	01GARRET	1	115	226/201	Winter Gen Deliv	Included
2022W3-GD-W107	235468	01FROSTB	235504	01RIDGLY	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W106	235468	01FROSTB	235504	01RIDGLY	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1752	208395	FARO FF	208393	FARO DC TIE	2	69/115	229	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-LD-ST24	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-S247	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-W102	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S249	235504	01RIDGLY	235484	01MESSCK	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W91	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-LD-ST26	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-S1763	314068	6OX	314039	6GALLOWS A	1	230	345	Summer Gen Deliv	Included
2022W3-LD-ST25	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-S252	235504	01RIDGLY	235484	01MESSCK	1	138	201	Summer Gen Deliv	Included
2022W3-LD-ST28	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-S260	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-LD-ST27	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-W902	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-S2063	221090	GLENARM2	221089	WINDYED1	1	115	232	Summer Gen Deliv	Included
2022W3-LD-ST19	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-GD-S1752	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-LD-ST18	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-GD-W105	200762	26GARRETT	235470	01GARRET	1	115	226/201	Winter Gen Deliv	Included
2022W3-GD-S1752	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-LD-ST21	200003	BRIGHTON	200004	CNASTONE	1	500/500	233/232	Load Deliverability	Included
2022W3-GD-S1752	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Summer Gen Deliv	Included
2022W3-LD-ST20	208047	PPL-BGE TIE	220963	CONASTON	1	230/230	229/232	Load Deliverability	Included
2022W3-GD-S1762	208395	FARO FF	208393	FARO DC TIE	1	69/115	229	Summer Gen Deliv	Included
2022W3-LD-ST23	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Load Deliverability	Included
2022W3-LD-ST22	208048	OTCR	208047	PPL-BGE TIE	1	230/230	229/229	Load Deliverability	Included
2022W3-GD-W91	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S827	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD-S1763	313805	6SHELLHORN1	314098	6GREENWAY1	1	230	345	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-LD-SNC7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W11	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-S176	814939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-LD-SNC6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W11	235471	01GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-LD-SNC9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W11	235471	01GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S176	814939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-LD-SNC8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S270	242613	05COLLEEN SS	244423	05JAMES RIVR	1	138	205	Summer Gen Deliv	Included
2022W3-GD-W92	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-LD-SNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W12	200519	26REED TAP	200522	26SHADE GP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S176	814939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-LD-SNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W11	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W11	237506	01CROSSCHOOL	235446	01BLACKO	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S176	242563	05BOXWD	242603	05CLIFFR	1	138	205	Summer Gen Deliv	Included
2022W3-LD-ST30	313911	6TWINCREEKS	314072	6PL VIEW	1	230/230	345/345	Load Deliverability	Included
2022W3-GD-W11	237506	01CROSSCHOOL	235446	01BLACKO	1	138	201	Winter Gen Deliv	Included
2022W3-LD-ST29	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Load Deliverability	Included
2022W3-GD-S262	235180	01FAYETT	235271	01WWAYNE	1	138	201	Summer Gen Deliv	Included
2022W3-LD-ST32	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Load Deliverability	Included
2022W3-GD-S264	242603	05CLIFFR	242613	05COLLEEN SS	1	138	205	Summer Gen Deliv	Included
2022W3-LD-ST31	313911	6TWINCREEKS	314072	6PL VIEW	1	230/230	345/345	Load Deliverability	Included
2022W3-LD-ST33	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Load Deliverability	Included
2022W3-GD-W12	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S177	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S280	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD-W922	235334	01GLENFL	235349	01HARR T	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S177	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-W124	13399	6MARS	313805	6SHELLHORN1	1	230	345	Winter Gen Deliv	Included
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W931	214084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W125	200519	26REED TAP	200522	26SHADE GP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S177	314759	6HOLLYMD	314734	6CASHSCORNER	1	230	345	Summer Gen Deliv	Included
2022W3-LD-SNC20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W126	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-S281	200065	PCHBTM2S	200064	PCHBTM1S	Z1	500	230	Summer Gen Deliv	Included
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W123	13393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-LD-SNC20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W130	235483	01MDWBRK	235444	01BART 1	1	138	201	Winter Gen Deliv	Included
2022W3-LD-SNC21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W122	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S828	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD-W138	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S276	204514	27TMI	204502	27JACKSON	1	230	227	Summer Gen Deliv	Included
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-S176	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-LD-SNC11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Load Deliverability	Included
2022W3-GD-W942	214084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1773	14197	6LDYSMITH CT	313837	6SUMMIT	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W1387	13440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S1772	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W1388	13440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S2992	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD-W1252	200519	26REED TAP	200522	26SHADE GP	1	115	226	Winter Gen Deliv	Included
2022W3-GD_L3103	14820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD-S3002	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD_L82	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-W942	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD_L3312	235105	01DOUBS	235459	01DOUBS	1	500/230	201/201	Light Load Gen Deliv	Included
2022W3-GD-W1383	14749	6CHARLVL	314772	6PROFFIT	1	230	345	Winter Gen Deliv	Included
2022W3-GD-S1779	13393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W952	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Winter Gen Deliv	Included
2022W3-GD_L89	242603	05CLIFFR	242613	05COLLEEN SS	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-GD-S1780	14901	8BATH CO	314991	8VALLEY SC	1	500	345	Summer Gen Deliv	Included
2022W3-GD_L83	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S3042	242613	05COLLEEN SS	244423	05JAMES RIVR	1	138	205	Summer Gen Deliv	Included
2022W3-GD-W1322	200065	PCHBTM2S	200064	PCHBTM1S	Z2	500	230	Winter Gen Deliv	Included
2022W3-GD-W1333	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S1772	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S1772	235483	01MDWBRK	235444	01BART 1	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1772	235483	01MDWBRK	235444	01BART 1	1	138	201	Summer Gen Deliv	Included
2022W3-GD_L1042	242613	05COLLEEN SS	244423	05JAMES RIVR	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-GD-S1783	14039	6GALLOWA	314052	6IDYLWOD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1782	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD_L1092	244423	05JAMES RIVR	244446	05SOAPSTONE	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-GD-S1783	14925	8PL VIEW	314072	6PL VIEW	1	500/230	345	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD_L15	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S1788	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD_L116	237310	01DANSMTN	235504	01RIDGLY	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S326	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD_L115	237310	01DANSMTN	235504	01RIDGLY	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S329	244423	05JAMES RIVR	244446	05SOAPSTONE	1	138	205	Summer Gen Deliv	Included
2022W3-GD_L359	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD-S1792	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Summer Gen Deliv	Included
2022W3-GD_L276	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD-S1782	214991	8VALLEY SC	314926	8VALLEY	1	500	345	Summer Gen Deliv	Included
2022W3-GD-S312	2208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD_L92	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S1783	314734	6CASHSCORNER	314758	6GORDNVL	1	230	345	Summer Gen Deliv	Included
2022W3-GD_L91	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-W130	200747	26PENN-MAR	200762	26GARRETT	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S1792	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-W121	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-W127	200762	26GARRETT	235470	01GARRET	1	115	226/201	Winter Gen Deliv	Included
2022W3-GD-S333	3314010	6BEAMEAD	313743	6INTERCONNEC	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W104	200762	26GARRETT	235470	01GARRET	1	115	226/201	Winter Gen Deliv	Included
2022W3-GD-S1792	220962	NWEST311	220972	GRANITE1	1	230	232	Summer Gen Deliv	Included
2022W3-GD-W108	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-W105	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-S1797	313746	6SOJOURNER	313822	6RUNWAY	1	230	345	Summer Gen Deliv	Included
2022W3-GD_L360	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD-S336	235486	01MILLVL	235597	01LOVETT	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W101	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-GD_L390	235503	01REID	235505	01RINGLD	1	138/138	201/201	Light Load Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W991	2005912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S1792	235479	01JUNCTN	235467	01FRNCHM	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S3302	235101	01BEDNGT	235445	01BEDNGT	3	500/138	201	Summer Gen Deliv	Included
2022W3-GD-W111	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-W122	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S1792	204515	27YORKANA	208048	OTCR	1	230	227/229	Summer Gen Deliv	Included
2022W3-GD_L1262	244446	05SOAPSTONE	242792	05SCOTSV	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-GD-W111	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W961	235446	01BLACKO	235103	01BLACKO	3	138/500	201	Winter Gen Deliv	Included
2022W3-GD_L1372	235504	01RIDGLY	235593	01HAMPS2	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S3402	204515	27YORKANA	208048	OTCR	1	230	227/229	Summer Gen Deliv	Included
2022W3-GD-W122	235188	01GREENE	235557	01LETTER	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L1342	235479	01JUNCTN	235467	01FRNCHM	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S1800	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W111	235463	01TANEY	235450	01CARROL	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L1472	235446	01BLACKO	235103	01BLACKO	3	138/500	201/201	Light Load Gen Deliv	Included
2022W3-GD-S1800	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W111	235463	01TANEY	235450	01CARROL	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L1382	235504	01RIDGLY	235593	01HAMPS2	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-W102	235468	01FROSTB	235504	01RIDGLY	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L1522	242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-GD-S2103	314039	6GALLOWS A	314052	6IDYLWOD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W111	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L1482	235446	01BLACKO	235103	01BLACKO	3	138/500	201/201	Light Load Gen Deliv	Included
2022W3-GD-S1803	314934	8SPOTSYL	314916	8MORRSVL	1	500	345	Summer Gen Deliv	Included
2022W3-GD_L3912	235503	01REID	235505	01RINGLD	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-W111	235469	01GARRET	235449	01CARLOS	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L1192	237310	01DANSMTN	235504	01RIDGLY	1	138/138	201/201	Light Load Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S337235101	01	BEDNGT	235445	01BEDNGT	1	500/138	201	Summer Gen Deliv	Included
2022W3-GD-W971235050	AD2-180	TAP	235501	01PARRN	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W126135120	01	ALBRIG	235492	01MTZION	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L133235479	01	JUNCTN	235467	01FRNCHM	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S179813859	6	BELMONT	314072	6PL VIEW	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W129135050	AD2-180	TAP	235501	01PARRN	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S179914749	6	CHARLVL	314772	6PROFFIT	1	230	345	Summer Gen Deliv	Included
2022W3-GD_L18 235471	01	GORE	235512	01STONEW	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD_L17 235471	01	GORE	235512	01STONEW	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-W981235518	01	WESTVA	237506	01CROSSCHOOL	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L142235504	01	RIDGLY	235593	01HAMPS2	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S180200512	26	LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W1 235501	01	PARRN	235479	01JUNCTN	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L141235504	01	RIDGLY	235593	01HAMPS2	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S180042603	05	CLIFFR	242613	05COLLEEN SS	1	138	205	Summer Gen Deliv	Included
2022W3-GD-W100137310	01	DANSMTN	235504	01RIDGLY	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W1 235592	01	HAMPS1	235471	01GORE	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S180235483	01	MDWBRK	235444	01BART 1	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S181035483	01	MDWBRK	235444	01BART 1	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W107137506	01	CROSSCHOOL	235446	01BLACKO	1	138	201	Winter Gen Deliv	Included
2022W3-GD_L143235504	01	RIDGLY	235593	01HAMPS2	1	138/138	201/201	Light Load Gen Deliv	Included
2022W3-GD-S180313393	8	MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W1 235483	01	MDWBRK	235444	01BART 1	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S180513837	6	SUMMIT	314138	6MINE RD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W103135471	01	GORE	235512	01STONEW	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S346200065	PCHBTM2S		200066	PCHBTM1N	2	500	230	Summer Gen Deliv	Included
2022W3-GD-W106135492	01	MTZION	235518	01WESTVA	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S347313440	8	VINTHIL	314913	8LOUDOUN	1	500	345	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W1203	235483	01MDWBRK	235444	01BART 1	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S3482	244423	05JAMES RIVR	244446	05SOAPSTONE	1	138	205	Summer Gen Deliv	Included
2022W3-GD_L1532	242638	05FIELDALE1	242831	05THORNT	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-GD-W7992	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-GD-W1602	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-N1-LLT6	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load N-1	Included
2022W3-GD-W7942	223938	DICKH230	223937	DICK 230	1	230	233	Winter Gen Deliv	Included
2022W3-N1-LLT5	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load N-1	Included
2022W3-GD-W7992	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-N1-LLT8	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT7	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load N-1	Included
2022W3-GD-W7952	223938	DICKH230	223937	DICK 230	1	230	233	Winter Gen Deliv	Included
2022W3-N1-LLT9	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load N-1	Included
2022W3-GD_L1922	242831	05THORNT	242642	05FRANKLIN	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-N1-WT182	235483	01MDWBRK	235444	01BART 1	1	138/138	201/201	Winter N-1	Included
2022W3-N1-LLT7	235105	01DOUBS	235459	01DOUBS	3	500/230	201/201	Light Load N-1	Included
2022W3-N1-LLT7	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT7	235105	01DOUBS	235459	01DOUBS	1	500/230	201/201	Light Load N-1	Included
2022W3-N1-LLT7	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT7	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT7	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT22	242603	05CLIFFR	242613	05COLLEEN SS	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT22	242603	05CLIFFR	242613	05COLLEEN SS	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT22	242603	05CLIFFR	242613	05COLLEEN SS	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT22	235490	01MORGAN	235453	01CHERYR	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT22	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT22	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT22	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-LLT2	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT3	242613	05COLLEEN SS	244423	05JAMES RIVR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT3	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT3	242613	05COLLEEN SS	244423	05JAMES RIVR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT3	242613	05COLLEEN SS	244423	05JAMES RIVR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT3	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT3	242613	05COLLEEN SS	244423	05JAMES RIVR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT3	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT3	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT3	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT4	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT4	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT4	235471	01GORE	235512	01STONEW	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT4	244423	05JAMES RIVR	244446	05SOAPSTONE	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT4	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT4	235467	01FRNCHM	235592	01HAMPS1	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT4	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Light Load N-1	Included
2022W3-N1-LLT4	235592	01HAMPS1	235471	01GORE	1	138/138	201/201	Light Load N-1	Included
2022W3-GD-S2	235490	01MORGAN	235453	01CHERYR	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S6	235471	01GORE	235512	01STONEW	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S7	235471	01GORE	235512	01STONEW	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S8	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S16	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1	235490	01MORGAN	235453	01CHERYR	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S16	235187	01GRANDP	235180	01FAYETT	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S16	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S16	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S17	235105	01DOUBS	235459	01DOUBS	1	500/230	201	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S10	235105	01DOUBS	235459	01DOUBS	3	500/230	201	Summer Gen Deliv	Included
2022W3-GD-S13	235484	01MESSCK	235490	01MORGAN	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S14	235484	01MESSCK	235490	01MORGAN	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1642	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S1642	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S15	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S35	235592	01HAMPS1	235471	01GORE	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S39	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S41	235592	01HAMPS1	235471	01GORE	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1642	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S23	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1642	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1642	235490	01MORGAN	235453	01CHERYR	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1642	235490	01MORGAN	235453	01CHERYR	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S34	235467	01FRNCHM	235592	01HAMPS1	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1652	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST84	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S2018	214916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-S1652	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST85	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST86	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST87	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST88	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1642	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S47	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S2018	235504	01RIDGLY	235593	01HAMPS2	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1652	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST79	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1652	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-ST80	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-GD-S49	235503	01REID	235505	01RINGLD	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST81	314068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST82	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1652	207922	BRIS	204515	27YORKANA	1	230	227/229	Summer Gen Deliv	Included
2022W3-GD-S1652	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST83	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included

New Flowgates

CONFIDENTIAL

Financial Information

Capital spend start date 01/2024

Construction start date 01/2027

Project Duration (In Months) 77

Cost Containment Commitment

Cost cap (in current year) CONFIDENTIAL

Cost cap (in-service year) CONFIDENTIAL

Components covered by cost containment

1. 502 Junction - Black Oak 500kV Transmission Line - Proposer
2. Black Oak - Doubs Greenfield 500kV Transmission Line - Proposer
3. Hunterstown - Doubs Greenfield 500kV Transmission Line - Proposer
4. Doubs - Goose Creek Greenfield 500kV Transmission Line - Proposer

5. Front Royal - Vint Hill Greenfield 500kV Transmission Line - Proposer

6. Goose Creek - Beaumeade Greenfield Underground 500kV Double Circuit Transmission Line - Proposer

Cost elements covered by cost containment

Engineering & design	Yes
Permitting / routing / siting	Yes
ROW / land acquisition	Yes
Materials & equipment	Yes
Construction & commissioning	Yes
Construction management	Yes
Overheads & miscellaneous costs	Yes
Taxes	Yes
AFUDC	Yes
Escalation	Yes
Additional Information	CONFIDENTIAL
Is the proposer offering a binding cap on ROE?	Yes
Would this ROE cap apply to the determination of AFUDC?	Yes
Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable?	No
Is the proposer offering a Debt to Equity Ratio cap?	CONFIDENTIAL
Additional cost containment measures not covered above	CONFIDENTIAL

Additional Comments

None